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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/784,498	02/23/2004	Dmitry Grebenev	063170.6658	2208

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BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER

MEHRMANESH, ELMIRA

ART UNIT	PAPER NUMBER
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2113

NOTIFICATION DATE	DELIVERY MODE
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ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptomail1@bakerbotts.com
glenda.orrantia@bakerbotts.com

Office Action Summary	Application No. 10/784,498	Applicant(s) GREBENEV, DMITRY	
	Examiner Elmira Mehrmanesh	Art Unit 2113	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 March 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to a RCE filed on March 18, 2008 for the application of Grebenev, for a "Kernel-level method of flagging problems in applications" filed February 23, 2004.

Claims 1-20 are pending in the present application.

Claims 1-20 have been amended.

Claims 1-20 are rejected under 35 USC § 102.

Claim Objections

Claim 14 is objected to because of the following informalities: In claim 14, line 6, "liking" should be changed to --linking--. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Chen et al. (U.S. Patent No. 5,684,945).

As per claim 1, Chen discloses a method of identifying problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

monitoring (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) at a kernel level system resource usage of one or more running processes (col. 26, lines 31-35 and 49-52) belonging to one or more user applications (col. 94, lines 8-12, wherein Chen discloses “*The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.***”) without modifying run-time environments of the one or more user applications (col. 21, lines 65-69 through col. 22, lines 1-2 and 42-52) and from the monitored system usage (col. 16, lines 19-23, *threshold alarm*), identifying to a user a first user application whose system usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 2, Chen discloses the system resource usage comprises a number of the one or more processes that each of the one or more user applications have spawned and the predetermined criteria comprises a predetermined limit on the number of processes that each of the one or more user applications may spawn (col. 93, lines 13-29) and (col. 94, lines 8-26).

As per claim 3, Chen discloses monitoring at a kernel level system resource usage of one or more running processes (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) comprises monitoring a parent-child relationship between each of the

one or more processes and each of the one or more user applications (col. 94, lines 8-12, wherein Chen discloses *"The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.**"*)

identifying to a user a first user application whose system usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60) comprises identifying a first user application that has orphaned one of the one or more running processes (col. 93, lines 13-29, ...**kill processes that have become "pathologically insane", or running rampant**).

As per claim 4, Chen discloses the system resource usage comprises memory usage of the one or more running processes (col. 26, lines 49-52).

As per claim 5, Chen discloses the one or more user applications comprise one or more applications initiated at the user level and the one or more running processes comprise one or more processes initiated at the kernel level by the one or more user applications (col. 90, lines 63-65).

As per claim 6, Chen discloses the system resource usage of the one or more running processes is monitored over a plurality of consecutive discrete time periods

(col. 92, TABLE 66).

As per claim 7, Chen discloses the system resource usage comprises an amount of memory usage for each of the one or more processes; and the predetermined criteria is a limit on a number of memory increases allowed during the plurality of time periods, an increase in amount of the system resource usage from a first period to a second period (col. 92, lines 23-67 through col. 93, lines 6-10).

As per claim 8, Chen discloses the system resource usage comprises an amount of memory usage for each of the one or more processes; (col. 94, lines 8-12, wherein Chen discloses *"The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.**"*); and the predetermined criteria is a generally continuous increase in the amount of memory usage during the plurality of time periods (col. 92, lines 23-67 through col. 93, lines 6-10).

As per claim 9, Chen discloses the system resource usage comprises a number of the one or more processes that each of the one or more user applications have spawned; and the predetermined criteria is a generally continuous increase in the number of child

processes spawned during the plurality of time periods (col. 93, lines 13-29) and (col. 94, lines 8-26).

As per claim 10, Chen discloses identifying to a user a first user application whose system usage pattern satisfies a predetermined criteria associated with one or more problems comprises saving an identifier of the first application in a reference file, and further comprising saving identifiers (col. 26, lines 38-63) of any other of the one or more user applications whose system usage pattern satisfies a predetermined criteria associated with one or more problems in the reference file (col. 94, lines 8-12, wherein Chen discloses *"The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, userid of the process owner, process memory utilization, CPU utilization, page faults, etc."*); and the predetermined criteria is a generally continuous increase in the amount of memory usage during the plurality of time periods (col. 92, lines 23-67 through col. 93, lines 6-10).

As per claim 11, Chen discloses a computer automatically monitors the kernel level system resource usage of one or more running processes and identifies the first user application (col. 90, lines 63-65).

As per claim 12, Chen discloses a method of identifying memory problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

monitoring (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) at a kernel level system memory usage of one or more running processes (col. 26, lines 31-35 and 49-52) belonging to one or more user applications (col. 94, lines 8-12, wherein Chen discloses “*The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.***”) without modifying run-time environments of the one or more user applications (col. 21, lines 65-69 through col. 22, lines 1-2 and 42-52) and producing an output comprising at least the memory usage (col. 9, lines 41-51, *data display system*); and from the monitored system usage (col. 16, lines 19-23, *threshold alarm*), identifying to a user a first user application whose memory usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 13, Chen discloses the memory usage of the one or more running processes is monitored over a plurality of consecutive discrete time periods, and the predetermined criteria is a limit on a number of memory increases allowed during the plurality of time periods (col. 92, lines 23-67 through col. 93, lines 6-10).

As per claim 14, Chen discloses a method of identifying memory problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

monitoring (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) at a kernel level system memory usage of one or more running processes (col. 26, lines 31-35 and 49-52) belonging to one or more user applications (col. 94, lines 8-12, wherein Chen discloses “*The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner**, process memory utilization, CPU utilization, page faults, etc.*”) without modifying run-time environments of the one or more user applications (col. 21, lines 65-69 through col. 22, lines 1-2 and 42-52) and producing an output comprising at least the memory usage (col. 9, lines 41-51, *data display system*); and

respectively linking each of the one or more running processes to each of the one or more user applications (col. 94, lines 8-12, **userid of the process owner**)

producing an output comprising at least the memory usage of one or more user applications (col. 9, lines 41-51, *data display system*)

and from the output, identifying an a first user application whose memory usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 15, Chen discloses a method of identifying memory problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

monitoring (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) at a kernel level system memory usage of one or more running processes (col. 26, lines 31-

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35 and 49-52) belonging to one or more user applications (col. 94, lines 8-12, wherein Chen discloses *"The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.**"*) without modifying run-time environments of the one or more user applications (col. 21, lines 65-69 through col. 22, lines 1-2 and 42-52) and from the monitored system usage (col. 16, lines 19-23, *threshold alarm*), identifying to a user a first user application whose memory usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 16, Chen discloses the monitored memory usage comprises at least a stack memory, data memory, and text memory (col. 26, lines 49-63).

As per claim 17, Chen discloses a method of identifying memory problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

collecting system resource usage (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) at a kernel level system memory usage of one or more running processes (col. 26, lines 31-35 and 49-52) belonging to one or more user applications (col. 94, lines 8-12, wherein Chen discloses *"The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner,***

process memory utilization, CPU utilization, page faults, etc.”) without modifying run-time environments of the one or more user applications (col. 21, lines 65-69 through col. 22, lines 1-2 and 42-52) and

from the collected system resource usage (col. 16, lines 19-23, *threshold alarm*), identifying to a user a first user application whose memory usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 18, Chen discloses a system for identifying problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

a data collection module (col. 69, line 35) operable to retrieve information about a running user applications application at a kernel level (col. 90, lines 63-64); and

a data analysis module (col. 86, lines 66-67 through col. 87, lines 1-15) operable to determine from the retrieved information an abnormal system usage pattern in the information; and identify from the abnormal system usage pattern, an a first user application whose system usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 19, Chen discloses a program storage device readable by machine, tangibly embodying a program of instructions executable by the machine to perform method steps of identifying problems in applications (Fig. 1) and (col. 22, lines 42-48), comprising:

monitoring (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) at a kernel level system resource usage of one or more running processes (col. 26, lines 31-35 and 49-52) belonging to one or more user applications (col. 94, lines 8-12, wherein Chen discloses “*The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.***”) without modifying run-time environments of the one or more user applications (col. 21, lines 65-69 through col. 22, lines 1-2 and 42-52) and from the monitored system usage (col. 16, lines 19-23, *threshold alarm*), identifying to a user a first user application whose system usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60).

As per claim 20, Chen discloses the system resource usage comprises a parent-child relationship between each of the one or more processes and each of the one or more user applications (col. 6, lines 61-63 and Fig. 1, element 90, *performance tool*) comprises monitoring a parent-child relationship between each of the one or more processes and each of the one or more user applications (col. 94, lines 8-12, wherein Chen discloses “*The user can select a "sort" button to reorder the menu of process data by a specific category or process parameter, e.g., process ID (PID), process name, process priority, **userid of the process owner, process memory utilization, CPU utilization, page faults, etc.***”); and

identifying to a user (col. 16, lines 19-23, *threshold alarm*) a first user application whose system usage pattern satisfies a predetermined criteria (col. 87, lines 53-56) associated with one or more problems (col. 92, lines 56-60) comprises identifying a first user application that has orphaned a process (col. 93, lines 13-29, ...***kill processes that have become "pathologically insane", or running rampant***).

Response to Arguments

Applicant's arguments filed March 18, 2008 have been fully considered but they are moot in view of new claim analysis. Refer to the corresponding section of the claim analysis for details.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

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For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Robert W. Beausoliel, Jr./

Supervisory Patent Examiner, Art Unit 2113